

Remarks

Claims 1 and 12 are amended. Accordingly, claims 1 to 4, 8, 9 and 12 to 14 are pending in this application of which claims 1, 12 and 13 are in independent form.

Applicants' attorney thanks Examiner Fineman for the personal interview held on April 27, 2004 at which time mutual agreement was reached in that a more precise definition of the plano-convex lens would appear to overcome the combination of Zonneveld and Lytle.

Claim 1 had been rejected under 35 USC 103(a) as being unpatentable over Zonneveld in view of Lytle. The following will show that the conclusion as to the allowability of claim 1 is indeed correct.

Zonneveld discloses an optical microscope including a display unit (see 33 in FIG. 1) which consists of display tubes 34 and 35. The image which is displayed by display tubes 34 and 35 is passed through coupling mirrors 37 and 38 to a video camera 40. However, Zonneveld does not describe any imaging optics for coupling the image of the display unit into the viewing beam path of the microscope.

On page 3 of the action, the view is expressed that:

"It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the projection lens assembly of Lytle in the system of Zonneveld to provide a simple projection assembly and save money by using inexpensive plastic lenses (column 1, lines 28-35)."

Applicants respectfully disagree that it would have been obvious to use a projection lens assembly in Zonneveld because Zonneveld has no projection lens assembly shown and makes no suggestion as to a possible need for such a device. Zonneveld shows a display unit 33 which comprises two miniature display tubes 34 and 35. At column 6, lines 13 to 16, Zonneveld explains that:

"Image data displayed on the display screens of the miniature display tubes are coupled into the operating microscope by means of a coupling device comprising coupling-in mirrors 37 and 38."

Thus, the coupling is direct and there is apparently no need for a projection lens assembly in Zonneveld which would not save money as suggested in the action but would increase the cost of the operating microscope disclosed in this reference.

From the above, it can be seen that our person of ordinary skill would have absolutely no motivation from Zonneveld to seek out a projection lens assembly as suggested in the action. However, this notwithstanding, suppose by some happenstance our person of ordinary skill hit upon Lytle and then somehow came upon the idea to insert the lens assembly thereof into Zonneveld. What would be the result?

Lytle relates to a projection lens assembly suitable for microfiche readers. Referring to FIG. 1 of Lytle, this projection lens assembly consists of a quasi-plano convex lens 16, a quasi-plano convex lens 13, a quasi-plano concave lens 14 and a convex-concave lens 15. It should be noted, that although in column 2, lines 30 to 35, of Lytle, lens element 14 is recited as being plano-concave, Lytle really discloses a lens

element 14 having a slightly concave first surface 26 and a second surface 27 which is deeply concave. However, this slightly concave first surface 26 of lens element 14 is crucial for the Lytle projection lens assembly and applicants have shown that Lytle would not work in combination with Zonneveld in the remarks and appendices of the amendment filed on October 6, 2003 which are incorporated herein by reference

As noted at the interview, although Lytle refers to lenses A and B as being plano-convex, lens A is really convex-concave and lens B is really convex-convex. This is clear from the description set forth in column 2 of this reference as well as from FIG. 1 thereof.

To make clear that the plano-convex lens set forth in applicants' claim 1 is indeed plano-convex, this claim is amended herein to incorporate the feature and limitation of:

"said plano-convex lens having an exactly planar surface of zero radius of curvature and a convex surface." (emphasis added)

The above feature is clearly intended in the applicants' disclosure as can be seen by reference to Table 1 on page 9 of the applicants' disclosure. There, for example, the lens made of N-LAF7 glass has a first surface which is identified as planar and a second surface which is provided with a numerical indication of curvature. The same is true of the next lens element made of SF1 glass which has a first surface provided with an indication of curvature and a second surface which is identified as planar. No numerical indication is given because the curvature here would be zero.

For the reasons advanced above, applicants respectfully submit that claim 1, as amended, places the applicants' invention well beyond the reach of a person exercising only ordinary skill so that this claim should now be allowable.

Claims 2 to 4, 8, 9 and 14 are dependent from claim 1 so that they too should now be allowable.

Claims 12 and 13 had been rejected under 35 USC 103(a) as being unpatentable over Zonneveld in view of Ernstoff et al. The following will show that these claims patentably distinguish the invention over this combination of references.

In support of the rejection, specific reference is made to FIG. 8 of Ernstoff et al on page 6 of the action and the view was expressed that:

"Ernstoff et al teaches in fig. 8, a reflection display (310, column 2, lines 57-58) illuminated sequentially with a single color as a function of time (insofar as the wheel can be stopped on a single color and, inherently, if more time is spent on a single color, it will be brighter than compared to a display exposed to sequential RGB illumination)."

The above was discussed at the interview and it was noted that it cannot be assumed from FIG. 8 of this reference that a display 10 can be illuminated sequentially with the light source 308 when the filter wheel 302 is stopped. Rather, the illumination of the display by the light source 308 would be simply continuous.

In contrast, applicants' claim 12 includes the feature and limitation of:

"... a time-dependent sequential illumination of said reflection display

with only a single color is provided so that the brightness of said image display unit is increased compared to a display exposed to sequentially RGB illumination."

The sequential illumination of the reflection display via a light source makes it possible, however, to cause a corresponding brightness impression for individual display pixels for an observer basically over the duration of the light pulses made available.

In view of the above, claim 12 should also patentably distinguish the applicants' invention over the combination of Zonneveld and Ernstoff et al and be allowable. Claim 13 also incorporates the above feature and limitation so that this claim too should likewise patentably distinguish the invention over this combination of references.

The application should now be in condition for allowance and reconsideration of this application is earnestly solicited.

Respectfully submitted,



Walter Ottesen
Reg. No. 25,544

Walter Ottesen
Patent Attorney
P.O. Box 4026
Gaithersburg, Maryland 20885-4026

Phone: (301) 869-8950

Date: April 28, 2004